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# THE OHIO STATE ENGINEER

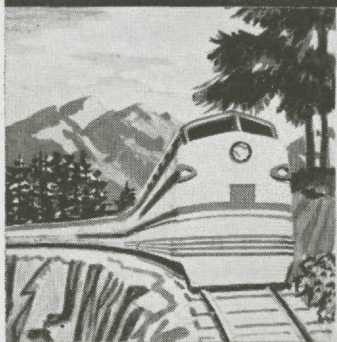
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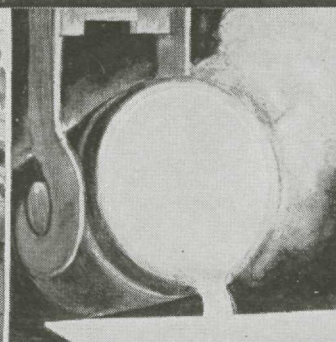




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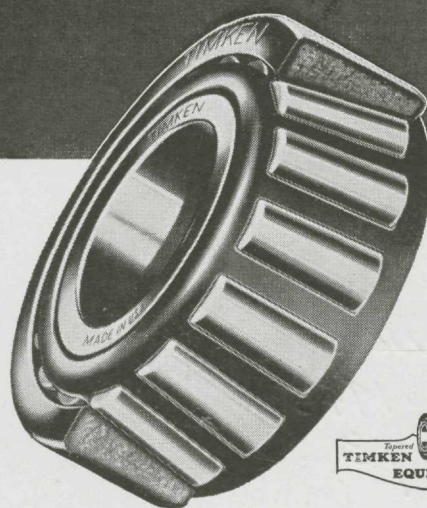
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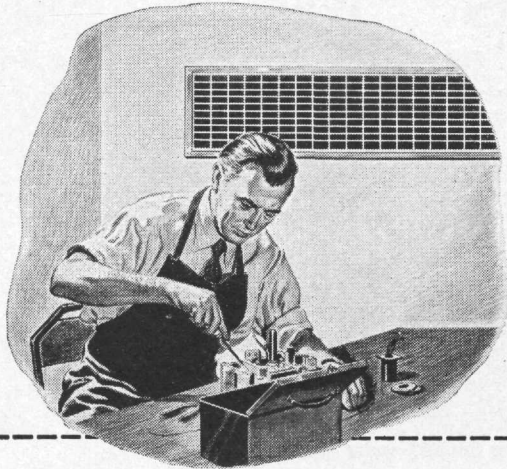
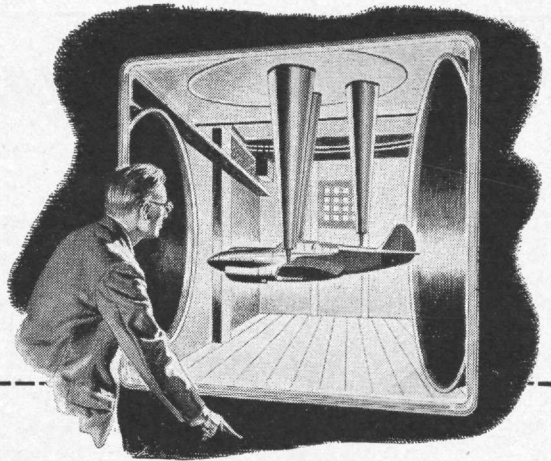
### TAPERED ROLLER BEARINGS

ALL THERE IS IN BEARINGS



In a wind tunnel an **AERONAUTICAL ENGINEER** uses a 40,000 horsepower electric motor to create a 400-mile-an-hour tornado for testing war planes.

*... the name on the MOTOR is Westinghouse.*

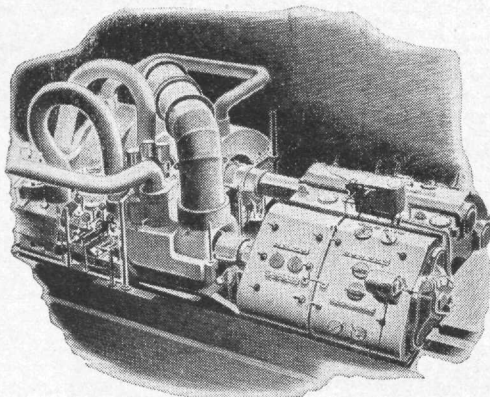
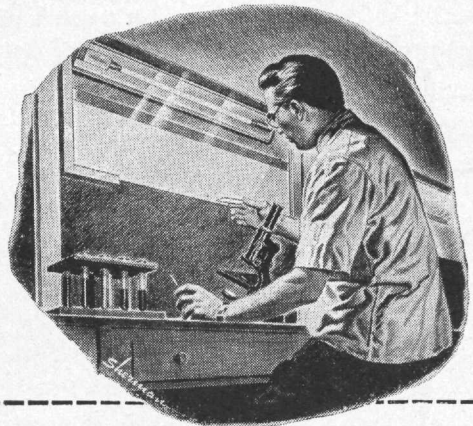


In a factory a **WORKER** assembles delicate bomb-sight parts in air made dust-free by the Precipitron\* electrostatic air cleaner.

*... the name on the PRECIPITRON\* is Westinghouse.*

In a penicillin plant a **SCIENTIST** uses a Sterilamp\* bactericidal tube to protect this life-saving drug from contamination by air-borne bacteria.

*... the name on the STERILAMP\* is Westinghouse.*



On America's largest aircraft carriers the **NAVY** uses steam turbines which make our carriers the world's fastest.

*... the name on the TURBINES is Westinghouse.*

**TODAY** — These are some of the ways in which Westinghouse products are serving in the war effort.

**TOMORROW** — Existing and new products of Westinghouse research and engineering will serve industry and the home.

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PLANTS IN 25 CITIES OFFICES EVERYWHERE

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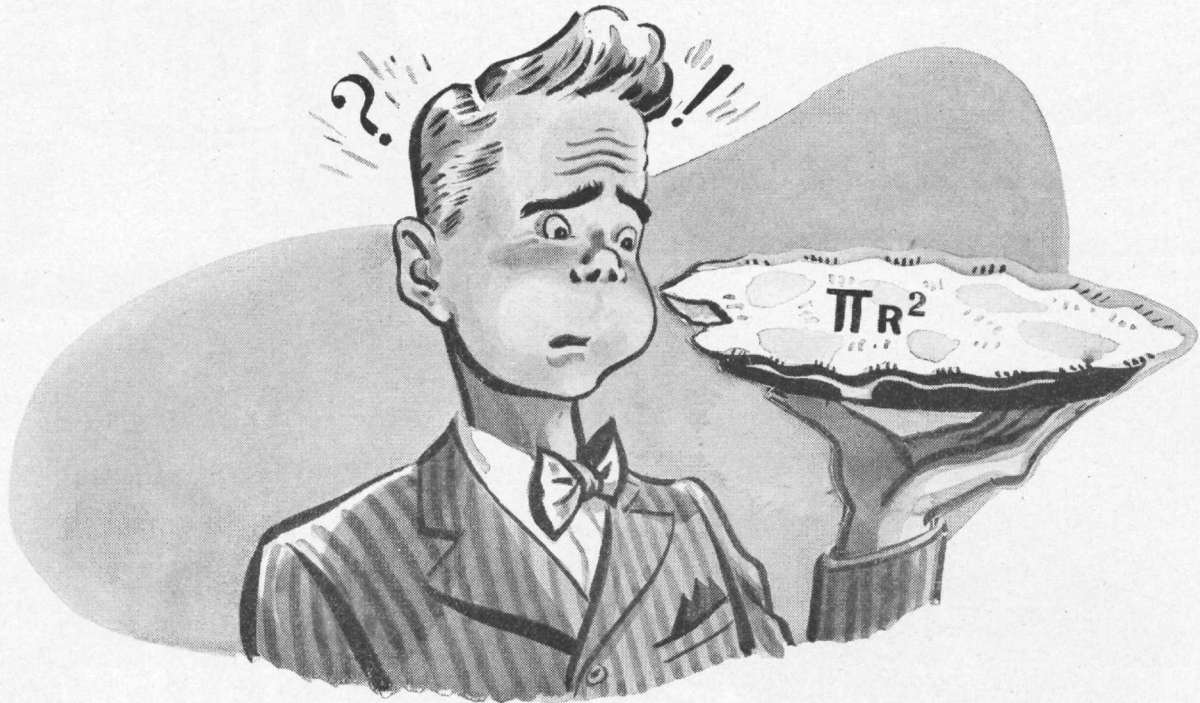
Tune in: **JOHN CHARLES THOMAS**—Sunday 2:30 pm, EWT, NBC.

**TED MALONE**—Mon. Tues. Wed. Evening, Blue Network

April, 1945

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**WHO SAYS MATH IS EASY AS PIE ?**

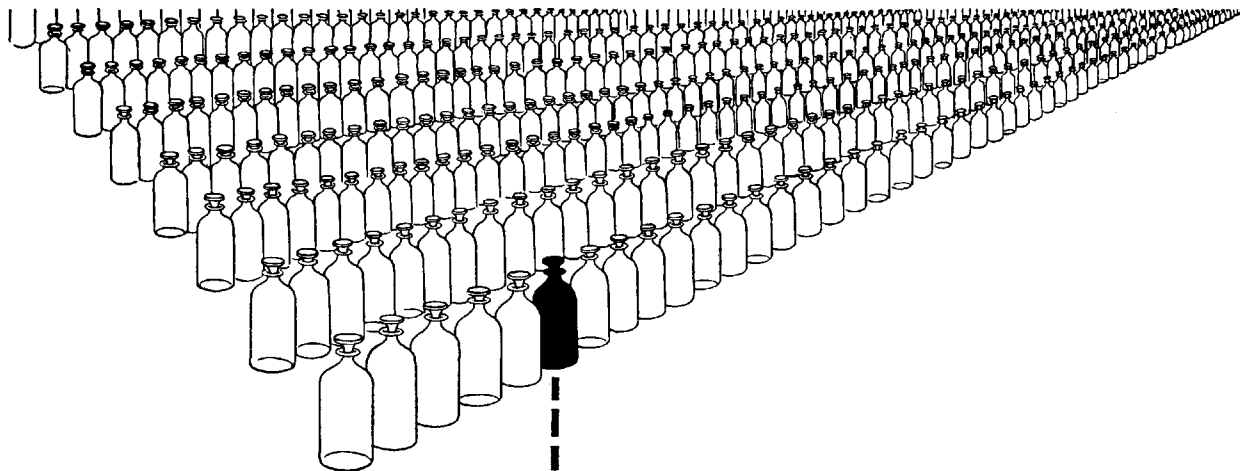


**It's a fright of a bite now—but it can build you up for  
a grand postwar job in the aviation industry**



**BUY WAR BONDS—BUY FOR KEEPS**





## Industry's "special account" with Dow

It is characteristic of large scale chemical operations, such as Dow's, that one thing leads to another. Sometimes materials emerge from development work not specifically sought for in the original task. Yet they are the logical result of established chemical reactions. Their properties, of course, are known, but their ultimate usefulness to industry has not been completely charted.

There are probably as many as 7,000 of these chemicals and

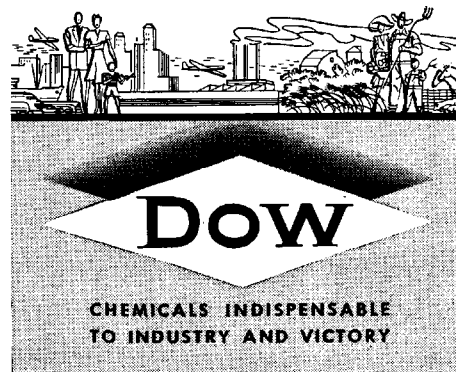
chemical compounds that have emerged from Dow laboratory developments. They are neither accidents nor by-products, but co-products. They align themselves readily into scientific groups—for example, phenolic derivatives. From time to time these are referred to technicians in various manufacturing fields who may find among them *just the needed chemical ingredient* to put the finishing touch to their own work in progress.

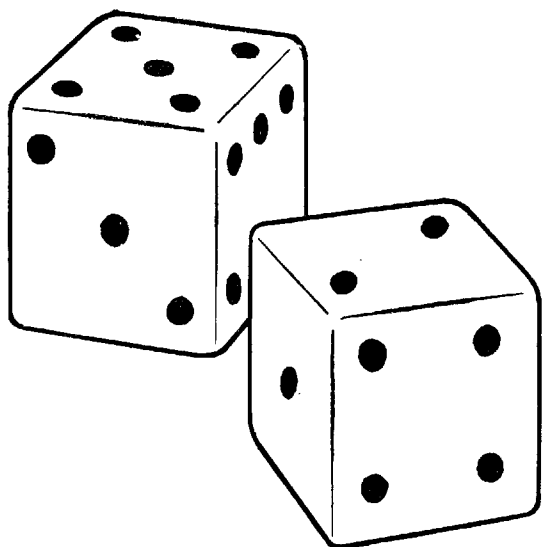
To borrow a banking analogy,

these chemicals are industry's "special account" with Dow on which it can draw so that constructive developments may proceed to their successful conclusion. And thus America at large has a genuine stake in this accumulation of potential assets.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

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# *It's* **GOOD LUCK** *to have Galvanized Roofing* *on Buildings*

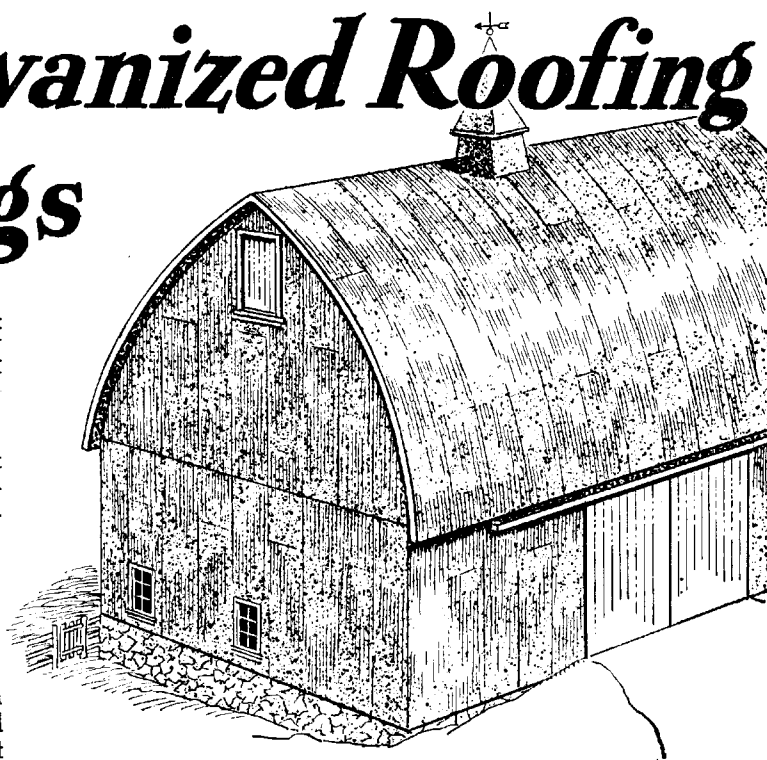
For in these days of material scarcities, galvanized roofing can be taken care of by simple, easy means and made to last a lifetime.

Galvanized roofing is zinc-coated roofing; and the U. S. Bureau of Standards states that zinc is "by far the best" protective metallic coating for iron or steel! Zinc in the form of galvanizing provides double protection:

*First*, by simple coverage, with a sheath of rust-resistant metal.

*Second*, by electro-chemical action or "sacrificial corrosion."

Galvanized roofing is used on more than a third of all the farm buildings in the United States — which proves that farmers are smart judges of roofing value!



## **Take Care Of It!**

It's just good business to take good care of galvanized roofing. It is so easy to do it, too, that there's no excuse for neglect. With reasonable care, galvanized roofing can be made to give a lifetime of satisfactory service. Get a copy of the free booklet

### **"How to Make Galvanized Roofing Last Longer"**

and the few simple steps to take will be made completely clear. The booklet is valuable. It's free—write for it today.



**American Zinc Institute**  
INCORPORATED  
**60 East 42<sup>nd</sup> Street, New York 17, N.Y.**

# The OHIO STATE ENGINEER

Vol. XXVIII

April, 1945

No. 5

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Engineering Montage—The generation, transmission, and control of power—precision tools and giant machines—fluorescent lights and molten metal—the time capsule, legacy of the industrial present to the unseen future.

—*Courtesy Westinghouse.*

### Our Frontispiece

Three million volts of "tailor made" lightning demonstrate safety of a car during an electrical storm. Bolt jumps over the left front tire to reach the ground.

—*Courtesy Westinghouse.*

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